

EN 50371 REPORT

REPORT NO.: SE941208L11

MODEL NO.: SDC-CF10G

ACCORDING: EN 50371:2002

APPLICANT: Summit Data Communications, Inc.

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ISSUED BY: Advance Data Technology Corporation

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1. CERTIFICATION

PRODUCT: SDC-CF10G 802.11g Compact Flash Module with Antenna Connectors

MODEL: SDC-CF10G

BRAND: Summit

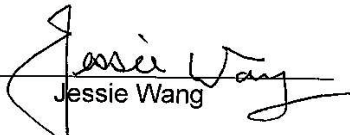
APPLICANT: Summit Data Communications, Inc.

TESTED: Mar. 22 ~ Apr. 18, 2006

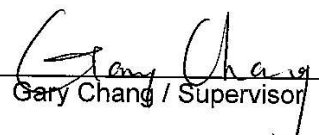
TEST SAMPLE: ENGINEERING SAMPLE

STANDARDS: EN 50371:2002

The above equipment has been tested by **Advance Data Technology Corporation**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY :  , **DATE:** Apr. 20, 2006
Jessie Wang

TECHNICAL
ACCEPTANCE :  , **DATE:** Apr. 20, 2006
Responsible for RF Stanely Hsu

APPROVED BY :  , **DATE:** Apr. 20, 2006
Gary Chang / Supervisor

2. GENERAL DESCRIPTION OF EUT

PRODUCT	SDC-CF10G 802.11g Compact Flash Module with Antenna Connectors
MODEL NO.	SDC-CF10G
SOURCE VOLTAGE	$V_{nom} = 230$ $V_{min} = 207$ $V_{max} = 253$
POWER SUPPLY	3.3Vdc from host equipment
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b: 11/5.5/2/1Mbps 802.11g: 54/48/36/24/18/12/9/6Mbps
NUMBER OF CHANNEL	7 for France 13 for other EU countries
OPERATING FREQUENCY	2400 ~ 2454MHz for France, 2400 ~ 2483.5MHz for other EU countries
EIRP POWER (FOR 802.11b)	15.83dBm (Measured Max. Average)
EIRP POWER (FOR 802.11g)	15.81dBm (Measured Max. Average)
ANTENNA TYPE	Refer to Note 1 as below
I/O PORTS	NA
DATA CABLE	NA

NOTE:

1. There are 3 antennas provided to this EUT. The information about those antennas as below table:

ANTENNA NO.	MODEL NAME	TYPE	GAIN	TYPE OF ANTENNA CONNECTOR
1	-	Dipole	2.2dBi	UFL
2	VMT	Dipole	2.2dBi	UFL
3	MX3	Printed	0dBi	UFL

* After pre-test for each type of antenna and chosen the antenna 2 & 3 for final test and recorded.

- The platform: (1) Mobile Data Terminals (MDTs), (2) Vehicle Mounted Devices (VMDs)
- The EUT, operates in the 2.4GHz frequency range, lets you connect IEEE 802.11g or IEEE 802.11b devices to the network. With its high-speed data transmissions of up to 54Mbps.
- The above EUT information was declared by the manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3. RF Exposure Measurement

3.1 Introduction

This generic standard applies to low power electronic and electrical apparatus for which no dedicated product – or product family standard regarding human exposure to electromagnetic fields applies.

The frequency range covered is 10 MHz to 300 GHz.

The object of this standard is to demonstrate the compliance of such apparatus with the basic restrictions on exposure of the general public to electric, magnetic and electromagnetic fields and contact current.

3.2 Compliance criteria

All electromagnetic fields

If the average power emitted by the apparatus operating in the frequency range 10 MHz to 300 GHz is less than or equal to 20 mW and the transmitting peak power is less than 20 W then the apparatus is deemed to comply with the basic restrictions without testing. Averaging time is 6 minutes in the frequency range 10 MHz to 10 GHz. The average time is equal to $68/f^{1.05}$ minutes (where f is in GHz) in the frequency range 10 GHz to 300 GHz.

If the total supply power or the input power to the circuitry producing the greatest emissions in the device is less than or equal to 20 mW then it is assumed that the emitted power is less than 20 mW.

Pulse modulated electromagnetic fields with pulse duration less than 30 micro seconds

For pulse of duration less than 30 microseconds at frequencies between 300 MHz and 10 GHz, there is also a basic restriction on SA. This is 2mJ kg^{-1} in any 10g of tissue in the head. For most pulses, the SAR restriction will be more stringent, but for pulses with a repetition frequency of less than 100 Hz, the SA restriction will predominate. For devices producing pulses with repetition rates below 100 Hz, the average power should be less than $20 \times \text{prf mW}$ (prf in Hz).

3.3 EUT Operating condition

The software provided by Manufacturer enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

3.4 Test Results

DSSS Mode:

Mode A

Channel	Channel Frequency (MHz)	AV Power (EIRP)(mW) in EN300 328	Correct factor(dB)	AV Power (EIRP) (mW) in EN 50371	AV Power Limit (EIRP) (mW)	PASS/ FAIL
1	2412	38.31	-3.01	19.16	20	PASS
4	2427	38.14	-3.01	19.07	20	PASS
7	2442	37.88	-3.01	18.94	20	PASS
13	2472	32.61	-3.01	16.31	20	PASS

Mode B

Channel	Channel Frequency (MHz)	AV Power (EIRP)(mW) in EN300 328	Correct factor(dB)	AV Power (EIRP) (mW) in EN 50371	AV Power Limit (EIRP) (mW)	PASS/ FAIL
1	2412	23.84	-3.01	11.92	20	PASS
4	2427	22.51	-3.01	11.25	20	PASS
7	2442	21.95	-3.01	10.97	20	PASS
13	2472	19.83	-3.01	9.92	20	PASS

Note.

1. According to EUT's specification, the compliance criteria item 2.1 shall be followed up.
2. Average power in EN 300 328 test report is measured under full load condition, so the average power shall be calibrated from the duty cycle.
The formula is average power +10 log(duty cycle)
3. Correct factor=10 log(duty cycle)
4. The duty cycle = 50 % is declared by manufacture under normal traffic load represents.

OFDM mode:

Mode A

Channel	Channel Frequency (MHz)	AV Power (EIRP)(mW) in EN300 328	Correct factor(dB)	AV Power (EIRP) (mW) in EN 50371	AV Power Limit (EIRP) (mW)	PASS/ FAIL
1	2412	35.59	-3.01	17.80	20	PASS
4	2427	38.14	-3.01	19.07	20	PASS
7	2442	36.17	-3.01	18.08	20	PASS
13	2472	34.38	-3.01	17.19	20	PASS

Mode B

Channel	Channel Frequency (MHz)	AV Power (EIRP)(mW) in EN300 328	Correct factor(dB)	AV Power (EIRP) (mW) in EN 50371	AV Power Limit (EIRP) (mW)	PASS/ FAIL
1	2412	20.48	-3.01	10.24	20	PASS
4	2427	22.56	-3.01	11.28	20	PASS
7	2442	21.25	-3.01	10.62	20	PASS
13	2472	20.34	-3.01	10.17	20	PASS

Note.

- According to EUT's specification, the compliance criteria item 2.1 shall be followed up.
- Average power in EN 300 328 test report is measured under full load condition, so the average power shall be calibrated from the duty cycle.
The formula is average power +10 log(duty cycle)
- Correct factor=10 log(duty cycle)
- The duty cycle = 50 % is declared by manufacture under normal traffic load represents.